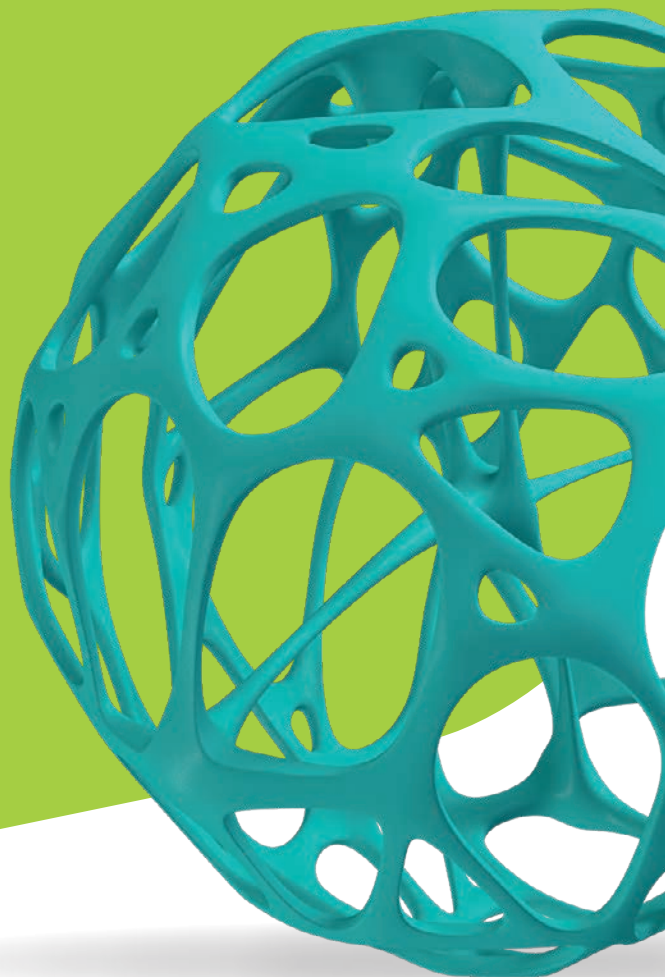
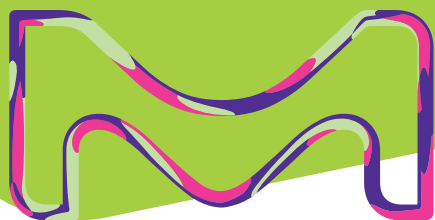


**SAFC®**

Pharma/Biopharma Raw Materials

# PLA & PLGA Polymer Portfolio for Peptide & Small Molecule Formulation



## Fine-tune your sustained-release injectable kinetics:

Choose your poly (D,L-lactic acid)(PLA) and/or poly (D,L-lactic-co-glycolic acid)(PLGA) biodegradable polymers from our portfolio to:

- Optimize the release kinetics of your final drug products with our wide range of biodegradable polymers
- Enhance patient comfort and compliance through reduced injections required for treatment
- Provide custom manufacturing capabilities for your unique polymer

PLA- and PLGA-based injectable formulations have already been approved by the United States Food and Drug Administration and the European Medicines Agency with several drug products on the market and many more drug products in clinical development.

Nano- and microsphere formulations based on PLGA polymers are studied intensively for the delivery of peptides, therapeutic proteins, hormones and antibiotics.

All of our polymers are manufactured in Europe and are subject to robust QC specifications which were developed with the end dosage form in mind, including bioburden and considering elemental impurity requirements based on ICHQ3D. We offer both small- and large-scale manufacturing following ICHQ7 Chapter 19 standards (for use in clinical trials) and boast an excellent track record of customer and FDA audits – making us your perfect global partner for top-quality biodegradable polymers.

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

**Millipore  
Sigma**

# PLA and PLGA Product Range

The typical technical data above serve to generally characterize the excipient. These values are not meant as specifications and they do not have binding character. The product specification is available separately, from the website:

[www.EMDMillipore.com](http://www.EMDMillipore.com)

We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.

## MilliporeSigma

400 Summit Drive  
Burlington, Massachusetts 01803

Phone: +1-800-645-5476

Email: [pcs.sale-support@emdmillipore.com](mailto:pcs.sale-support@emdmillipore.com)

[www.EMDMillipore.com](http://www.EMDMillipore.com)

© 2021 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.

MilliporeSigma, the Vibrant M and SAFC are trademarks of Merck KGaA, Darmstadt, Germany and/or its affiliates.

EXPANSORB® is a registered trademark of Groupe PCAS, Longjumeau, France.

All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources.

01/2021

Lit. No. MS\_FL3696EN

Product	Order No.	Poly (D,L-lactic acid) (PLA)	Ratio L/DL	End Group	I.V. range (dL/g, CHCl <sub>3</sub> , 25°C)	MW (indicative range, kDa)
EXPANSORB® DL 100-1A	5.43108	PDLLA	0/100	COOH	0.05-0.20	6-20
EXPANSORB® DL 100-2A	5.43109	PDLLA	0/100	COOH	0.15-0.30	10-25
EXPANSORB® DL 100-5A	5.43110	PDLLA	0/100	COOH	0.40-0.60	45-80
EXPANSORB® DL 100-7A	5.43111	PDLLA	0/100	COOH	0.60-0.80	70-120
EXPANSORB® DLL 10-15A	5.43112	P(L/DL)LA	90/10	COOH	1.30-1.70	200-250
EXPANSORB® DL 100-2E	5.43113	PDLLA	0/100	ESTER	0.15-0.30	10-25

Product	Order No.	Poly (D,L-lactic-co-glycolic acid) (PLGA)	Ratio L/G	End Group	I.V. range (dL/g, CHCl <sub>3</sub> , 25°C)	MW (indicative range, kDa)
EXPANSORB® DLG 45-2A	5.43114	PLGA	45/55	COOH	0.15-0.30*	15-30
EXPANSORB® DLG 50-2A	5.43115	PLGA	50/50	COOH	0.15-0.25	5-20
EXPANSORB® DLG 50-3A	5.43116	PLGA	50/50	COOH	0.25-0.40	15-40
EXPANSORB® DLG 50-5A	5.43117	PLGA	50/50	COOH	0.40-0.55	42-65
EXPANSORB® DLG 50-6A	5.43118	PLGA	50/50	COOH	0.55-0.65	60-85
EXPANSORB® DLG 50-8A	5.43119	PLGA	50/50	COOH	0.65-0.90	80-130
EXPANSORB® DLG 55-5A	5.43120	PLGA	55/45	COOH	0.40-0.50	42-65
EXPANSORB® DLG 65-3A	5.43121	PLGA	65/35	COOH	0.25-0.35	15-40
EXPANSORB® DLG 65-6A	5.43122	PLGA	65/35	COOH	0.50-0.65	45-85
EXPANSORB® DLG 75-2A	5.43124	PLGA	75/25	COOH	0.08-0.21	5-20
EXPANSORB® DLG 75-5A	5.43125	PLGA	75/25	COOH	0.38-0.64	37-84
EXPANSORB® DLG 75-7A	5.43126	PLGA	75/25	COOH	0.60-0.70	70-85
EXPANSORB® DLG 75-8A	5.43127	PLGA	75/25	COOH	0.70-0.90	76-130
EXPANSORB® DLG 75-10A	5.43123	PLGA	75/25	COOH	0.80-1.10	110-166
EXPANSORB® DLG 85-2A	5.43129	PLGA	85/15	COOH	0.15-0.25	10-15
EXPANSORB® DLG 85-7A	5.43128	PLGA	85/15	COOH	0.55-0.75	65-95
EXPANSORB® DLG 90-5A	5.43130	PLGA	90/10	COOH	0.35-0.55	30-70
EXPANSORB® DLG 90-7A	5.43131	PLGA	90/10	COOH	0.60-0.75	50-95
EXPANSORB® DLG 95-2A	5.43132	PLGA	95/5	COOH	0.15-0.25	5-20
EXPANSORB® DLG 95-4A	5.43133	PLGA	95/5	COOH	0.25-0.50	35-60
EXPANSORB® DLG 50-2E	5.43134	PLGA	50/50	ESTER	0.15-0.25	5-20
EXPANSORB® DLG 50-6E	5.43135	PLGA	50/50	ESTER	0.55-0.65	60-85
EXPANSORB® DLG 50-7E	5.43136	PLGA	50/50	ESTER	0.60-0.70	70-100
EXPANSORB® DLG 65-6E	5.43137	PLGA	65/35	ESTER	0.50-0.65	45-85
EXPANSORB® DLG 75-2E	5.43138	PLGA	75/25	ESTER	0.15-0.30	10-25
EXPANSORB® DLG 75-4E	5.43139	PLGA	75/25	ESTER	0.30-0.50	25-60
EXPANSORB® DLG 75-7E	5.43140	PLGA	75/25	ESTER	0.66-0.80	80-115
EXPANSORB® DLG 75-9E	5.43141	PLGA	75/25	ESTER	0.75-1.00	100-160
EXPANSORB® DLG 85-7E	5.43142	PLGA	85/15	ESTER	0.55-0.75	65-95
EXPANSORB® DLG 85-12E	5.45583	PLGA	85/15	ESTER	1.00-1.30	185-210
EXPANSORB® DLG 50-6P	5.43143	PLGA-PEG	50/50	PEG	0.45-0.65	30-60
EXPANSORB® DLG 50-7P	5.43144	PLGA-PEG	50/50	PEG	0.65-0.80	60-85
EXPANSORB® DLG 75-4A	5.45223	PLGA	75/25	COOH	0.30-0.50	25-60

Products available in non-GMP sample form; contact us for a quote on GMP manufacturing.

\*I.V. mathematically derived